WILD TIMES

KIDS MAGAZINE

SUMMER 2021

INSIDE:

Meet Barnacle, the mussel-sniffing dog!

Make sure your aquarium is moss-ball free

Healthy aquatic ecosystems

Make a spoon-lure!

ACTIVITIES | LESSONS | INFORMATION | FUN

Rainbow trout in Sinks Canyon near Lander, Wyoming. *(Adobe Stock Photo)*

Healthy aquatic ecosystems help create fishing opportunities

If you were to ask the average person what lives in a lake or stream, they would most likely think of some fish, plants and maybe a few insects. But there is so much more life beneath the water's surface than just those three things!

Wyoming is home to over 27,000 miles of rivers and streams, and 4,200 lakes! Under the surface of the water you will find living things (biotic factors) such as macroinvertebrates (small, backboneless creatures), mussels, crustaceans, plants, algae, bacteria, plankton, fish and more! These living things all depend on nonliving things (abiotic factors) to survive.

Can you think of any non-living things that they might use? Water is one easy example! So is sunlight, temperature, oxygen, rocks, soil and chemicals. An ecosystem is what we call all of the living and nonliving things that are in the same place and interact with one another. In order for an ecosystem to be healthy, and for it to provide fun recreation opportunities and fishing adventures, all of these abiotic and biotic factors need to work together and be in balance.

Snake River cutthroat trout. *(WGFD photo)*

Pocketbook mussels. *(Photo by Chris Martin/WGFD)*

A good balance

Wyoming Game and Fish Department biologists work hard to help keep biotic and abiotic factors in a balanced state. For example, the plain pocketbook mussel, a Wyoming native species, is a small unassuming looking creature. But the plain pocketbook mussel has huge impacts for aquatic ecosystem health and thus, fishing opportunities!

Stephen Siddons, a biologist with Game and Fish led a plain pocketbook mussel reintroduction in 2020 in the Laramie river. Mussels are known as the "liver of the river," meaning they help filter out wastes and chemicals, leaving the water cleaner than it started!

Many species of freshwater mussels are threatened or endangered, but the work of biologists like Stephen can help return these amazing creatures back to the rivers to keep them clean and healthy for the plants and animals that live there and the people who like to recreate there!

Stephen Siddons prepares to transfer pocketbook mussels into the Platte River. *(Photo by Chris Martin/WGFD)*

WILDLIFE PROFILES

Channel Catfish (*Ictalurus punctatus*)

Range: Channel catfish range from southern Canada all the way to northern Mexico, east of the Rockies to west of the Appalachians. Channel catfish have been introduced around the world in 32 countries, including Japan, Russia, Italy and Brazil to raise for food and recreational fishing opportunities.

Size: Channel catfish can grow up to 52 in., with the most common size being around 22 in. In most waterways, the average weight of a channel catfish is 2 - 4 lbs. The record channel catfish caught in Wyoming was 28.52 lbs and caught in the Flaming Gorge Reservoir.

Habitat: Channel catfish prefer streams and rivers with clean, well-oxygenated water, but can also be found in ponds and reservoirs. They need warm water to spawn and often spend the majority of their time in warm water.

Young: Female channel catfish need cool water and short days for their eggs to develop properly. During spawning season, male channel catfish turn darker and develop a thick pad on top of their heads. The spawning pair will dig a depression or find an existing cavity to deposit their eggs. The male catfish then guards them until the eggs hatch!

Predators: Predators to the channel catfish include larger fish such as flathead catfish and chestnut lamprey, and they can be hosts to parasitic mollusks.

Food: Channel catfish feed on small fish, crustaceans (like crayfish), snails, aquatic insects, and small mammals. It has even been reported that some will eat small birds! They have a very keen sense of smell and taste, with very sensitive odor-sensing organs in their nares (nostrils) and taste buds distributed all over their bodies! Imagine being able to taste with your hands, arms, legs, and even feet!

Did you know? Channel catfish are the most fished catfish species in the US. The albino (lacking skin pigments) form of the channel catfish is popular in the aquarium industry.

WILDLIFE PROFILES

Arctic Grayling (*Thymallus arcticus*)

Range: The Arctic grayling is native to the cold drainages from the Arctic in Canada, Alaska, Siberia and the Hudson Bay. In Wyoming, Arctic grayling can be found in lakes and streams in the Teton Range.

Size: Arctic grayling are commonly 13.5 inches, but the record was a whopping 30 inches long! The heaviest recorded Arctic grayling was 8.4 lbs, but they commonly are found in the range of 4-5 lbs.

Habitat: Arctic grayling live in open, cold, clear lakes and streams with a high oxygen concentration. They will spawn in the spring time in mountain streams with clear, fast moving currents and gravel bottoms.

Young: Arctic grayling spawn in shallow areas of rivers - they almost never spawn in lakes. Only about 10% of fry that hatch will make it to adulthood. Arctic grayling fry hatch 2 - 3 weeks after spawning. They swim towards the calmer, warmer shoreline water. Their growth is some of the fastest of any arctic fish species!

Predators: Predators of Arctic grayling include trout, pike, eagles, osprey, otters and mink.

Food: Young Arctic grayling feed on zooplankton, and as they age they transition to adulthood they move onto insect larvae. As they grow, they often eat salmon eggs, mayflies, blackflies, caddisflies, and even the occasional small rodent like lemmings or voles.

Did you know? Arctic grayling's scientific name (Thymallus arcticus) comes from the faint smell of thyme that comes from their flesh.

Barnacle is a 5-year-old black lab trained to detect zebra/quagga mussels and their larval forms on water vessels. *(Photo by Parker Loew/WGFD)*

Important invasive species ALERT!

You have probably heard of dogs that provide comfort to those in a hospital, find lost humans, and even sniff out drugs and bombs. The Wyoming Game and Fish Department used another type of working dog to help prevent the spread of invasive species in aquatic habitats. Meet Barni, short for Barnacle, the mussel-sniffing dog!

Barni spends his days sniffing boats entering Wyoming from out of state. His handler walks him past each boat, and Barni spends about 15 seconds sniffing for invasive mussels. If he gets a whiff of zebra or quagga mussels, he will sit down and look at his handler, signaling this boat might have some of these problem species hitching a ride. His keen sense of smell and six weeks of training to specifically find zebra and quagga mussels helps to keep Wyoming's waterways clear of these invasive species.

Zebra and quagga mussels are very damaging to the environment and lots of fun activities -- like fishing and boating. Wyoming is one of the five states out of the lower 48 that do not have a suspected zebra and quagga mussel infestation. Game and Fish, with help from dogs like Barnacle, is working to keep it that way!

A build your own lure out of a plastic spoon

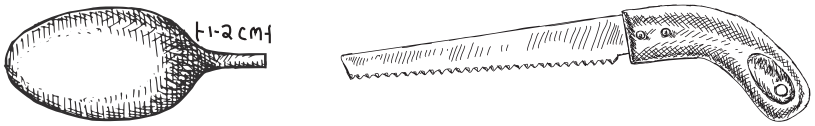
What you will need:

- Plastic spoon
- Acrylic paint
- Paintbrush
- Two slip loops
- Swivel
- Hook
- Drill and drill bit
- Saw

Steps:

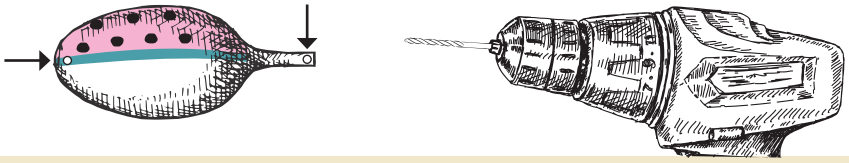
Step 1: Make sure to involve an adult while you are making your spoon lure! The drill and saw should only be used by adults or with adult supervision.

Step 2: Use a saw to cut the handle off the plastic spoon, leaving 1-2 cm of the handle intact.

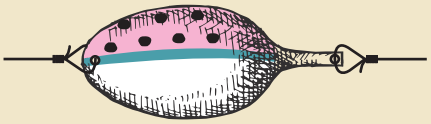


Step 3: Paint the spoon! You can get really creative here. Try making your spoon look like the shell of a beetle, using reflective or glittery pain or imitating other spoon lures you see online or in your tacklebox.

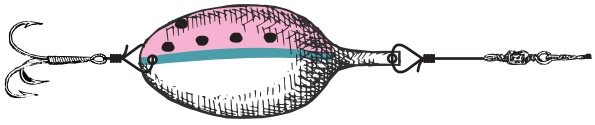
Step 4: Drill a small hole towards the end of what is left of the handle, and the end of the bowl.



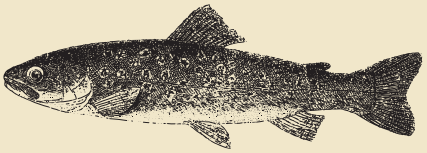
Step 5: Thread a slip loop into each of the holes you have drilled.



Step 6: Attach the swivel to the loop on the handle end and the hook to the hole in the bowl.



Step 7: Try out your new fishing spoon!



TEST YOUR KNOWLEDGE

MATCH THE FLY TO THE ACTUAL SPECIES IT REPRESENTS!

FLY		SPECIES	
A		Black ant	
B		Caddisfly nymph	
C		Mayfly nymph	
D		Damselfly	
E		Grasshopper	

Answers: Black ant - C, Caddisfly nymph - B, Mayfly nymph - D, Damselfly - E, Grasshopper - A.

LEARNING LINKS

If you enjoyed this issue of Wild Times and would like to see more, visit
https://wgfd.wyo.gov/Education/Conservation-Education/Wild-Times

Books to check out

Over and Under the Pond
By Kate Messner

Creekfinding
A true story by Jacqueline Briggs Martin

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